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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/177,902	10/23/1998	DAVID A. HOLMAN	E-1658	3711
7590 06/16/2004				
DOUGLAS E. MCKINLEY, JR. PO BOX 202 RICHLAND, WA 99352			EXAMINER CINTINS, IVARS C	
			ART UNIT 1724	PAPER NUMBER

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/177,902

Applicant(s)

HOLMAN ET AL.

Examiner

Ivars C. Cintins

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1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The claims are deemed to be incomplete and/or indefinite because they fail to recite all of the steps, and/or their order, necessary to produce the recited functions. For example, claim 1 recites "flowing a mixture of matrix material and fluid into a column chamber and forming a packed column from the matrix material" (lines 3-4). However, it appears essential that the rod or column chamber be rotated into the first position prior to this mixture flowing step, into order to block the flow of matrix material to the outlet. Otherwise, this mixture flowing step would not be capable of producing a packed column, since the matrix material would simply flow out of the outlet port along with the fluid. Claim 5 is incomplete because it recites "the flow port alternately open or partially obstructed by a binary end of a rod placed in the actuator port by rotating either said rod or the column chamber with respect to the other wherein said binary end of said rod blocks the flow of a matrix material in a first position, permits the flow of said matrix material in a second position, and maintains contact with said fluid flow and allows the flow of a fluid in all positions" (lines 3-9) but fails to positively recite individual steps of rotating the rod or column chamber into the open and partially obstructed positions. Furthermore, it appears essential that the mixture flowing step for packing the matrix material within the column chamber (lines 10-12) be conducted only when the flow port is in the "partially obstructed" (i.e. first) position. Claims 8 and 17 similarly fail to recite rotating the rod or column chamber to the first position prior to the mixture flowing step (see lines 10-12 of

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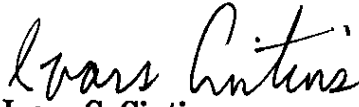
claim 8; and lines 9-11 of claim 17); and therefore, these claims are also deemed to be incomplete and/or indefinite. Claims 2-4, 6, 7 and 9-16 depend from indefinite claims, and are therefore themselves indefinite.

Claims 1-17 would be allowed if rewritten or amended to overcome the above rejection under 35 U.S.C. § 112 because Applicant has demonstrated that the rotating, binary end, rod system recited in the claims produces unexpectedly superior results in comparison to the piston-like solid rod system of the prior art. Also, although not indefinite, Applicant should consider changing "and outlet" to --- an outlet --- in line 5 of claim 1, in order to improve the grammar of this claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Blaine Copenheaver, can be reached at (571) 272-1156.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ivars C. Cintins
Primary Examiner
Art Unit 1724

I. Cintins
June 13, 2004